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L Number	Hits		DB	Time stamp
76	177			2003/06/07 13:43
		vibrator or vibration or piezoelectric or	DERWENT;	1
		(piezo adj electric))) same ((secondary	IBM_TDB	;
		near3 coil) same (transducer or vibrator		
I		or vibration or piezoelectric or (piezo	•	ı
	254005	adj electric)))	Lugpan	1 2002 (25 (12 10 47
- 1	254095	vibrat\$8	USPAT; US-PGPUB	2003/05/12 10:47
_	488883	magnates	•	2003/05/12 10:48
-	400003	magnet\$8	USPAT;	2003/03/12 10:48
_	12640	primary near3 coil	USPAT:	2003/06/07 12:48
	12040	primary hears corr	US-PGPUB	2003/00/07 12:40
-	11631	secondary near3 coil	USPAT;	2003/05/12 11:00
	6554	(animany pany) soil with (secondary pany)	US-PGPUB USPAT;	2002/05/12 11.00
_	6334	(primary near3 coil) with (secondary near3 coil)	US-PGPUB	2003/05/12 11:00
_	1612	magnet\$8 with ((primary near3 coil) with	USPAT;	2003/05/12 11:00
1	1012	(secondary near3 coil))	US-PGPUB	1
_	26	vibrat\$8 same (magnet\$8 with ((primary	USPAT;	2003/05/12 11:29
ļ	20	near3 coil) with (secondary near3 coil)))	US-PGPUB	1
_	24537	(contact or stylus) with vibrat\$8	USPAT;	2003/05/12 11:09
ļ	=		US-PGPUB	1
_	6	(((contact or stylus) with vibrat\$8) same	USPAT;	2003/05/12 11:29
l		((primary near3 coil) with (secondary	US-PGPUB	!
		near3 coil))) or ((touch with vibrat\$8)	I	į .
		same ((primary near3 coil) with (secondary	1	
		near3 coil)))	1	<u> </u>
-	1784	(((contact or stylus) with vibrat\$8) same	USPAT;	2003/05/12 11:11
		magnet\$8) or ((touch with vibrat\$8) same	US-PGPUB	ı
ŀ		magnet\$8)		
-	516	(((contact or stylus or touch) with	USPAT;	2003/05/12 11:29
		vibrat\$8) same magnet\$8) same coil	US-PGPUB	2003/05/12 11:24
-	18758	(contact or stylus or touch).ti.	USPAT; US-PGPUB	2003/03/12 11:24
	4.4	(vibrat\$8 or resonan\$6).ti. and ((contact	USPAT;	2003/05/12 11:30
-	4 4	or stylus or touch).ti.)	US-PGPUB	2003/03/12 11.30
_	24	vibrat\$8 same (magnet\$8 with ((primary	EPO; JPO;	2003/05/12 11:29
	23	near3 coil) with (secondary near3 coil)))	DERWENT;	1
		1.00.20 00.22,	IBM TDB	t i
- i	6	(((contact or stylus) with vibrat\$8) same	EPO; JPO;	2003/05/12 11:29
		((primary near3 coil) with (secondary	DERWENT;	
		near3 coil))) or ((touch with vibrat\$8)	IBM_TDB	
		same ((primary near3 coil) with (secondary	İ	
		near3 coil)))	200 700	2002/05/12 11:30
-	273		EPO; JPO;	2003/05/12 11:30
		vibrat\$8) same magnet\$8) same coil	DERWENT;	'
	0050	(without 60 or regenerate) ti and (/contact	EPO; JPO;	2003/05/12 11:31
- !	2858		DERWENT;	[[[[[[[[[[[[[[[[[[[[
		or stylus or touch).ti.)	IBM TDB	1
_	1277	20001121.ad.	JPO JPO	2003/06/07 12:13
_	2	20001121.ad. and matsuki.in.	JPO	2003/06/07 12:15
_	1	20001121.ad. and hidaka.in.	JPO	2003/06/07 12:17
_	0	JP02002165219A.pn.	DERWENT	2003/06/07 12:17
_	ĭ	2002156219\$.pn.	DERWENT	2003/06/07 12:17
_	ī	2002-486158.NRAN.	DERWENT	2003/06/07 12:18
-	624	(primary near3 coil) same (transducer or	USPAT;	2003/06/07 12:49
		vibrator or vibration or piezoelectric or	US-PGPUB	1
		(piezo adj electric))		1 2002/05/03 10 10
-	538	(secondary near3 coil) same (transducer or	USPAT;	2003/06/07 12:49
		vibrator or vibration or piezoelectric or	US-PGPUB	,
		(piezo adj electric))	HCDATT.	. 2002/06/07 12:42
-	374	((primary near3 coil) same (transducer or	USPAT; US-PGPUB	2003/06/07 13:43
		vibrator or vibration or piezoelectric or	03-16100	
		(piezo adj electric))) same ((secondary near3 coil) same (transducer or vibrator		
		or vibration or piezoelectric or (piezo		!
		adj electric)))		!
_	0	5663504.URPN.	USPAT	2003/06/07 13:17
		Loosso Tonin.		

PAT-NO:

JP02002243538A

DOCUMENT- JP 2002243538 A

IDENTIFIER:

TITLE:

VIBRATION

DETECTION SYSTEM

OF ELASTIC

MATERIAL

PUBN-DATE: August 28, 2002

INVENTOR-INFORMATION:

COUNTRY NAME

HIDAKA, KAZUHIKO N/A

MATSUKI, KAORU N/A

OKAMOTO, KIYOKAZUN/A

ASSIGNEE-INFORMATION:

COUNTRY NAME

MITSUTOYO CORPN/A

APPL-NO: JP2001037408

APPL-DATE: February 14, 2001

INT-CL G01H011/02, (IPC): G01B007/00, G01B021/00, G01H009/00,

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a vibration detection system of an elastic material capable of acquiring a detection signal having an improved S/N ratio, and grasping

vibration of the elastic material highly accurately, and having a simple and inexpensive constitution.

SOLUTION: In this vibration detection system, a detection signal from a detection means 23 for detecting the vibration state of a stylus 21 is received by a primary coil 31 of a magnetic circuit 30, and the vibration of the stylus 21 is detected by using an output signal generated from a secondary coil 32 by mutual induction. Even when the stylus 21 is excited in a

main vibration mode and vibration in multiplex vibration modes including a high-frequency component is generated in the stylus 21 by the mass of the stylus 21 or the like, the highfrequency component is hardly reflected to the output signal from the secondary coil 32, because the coil has such a property that a highfrequency current hardly flows therein. Therefore, the output signal to which vibration behavior in the main vibration mode is reflected highly accurately can be acquired, and the

<u>vibration</u> state of the stylus 21 can be grasped highly accurately by observing the output signal.

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